

Patent Claims:

1. Tire pressure-monitoring device for a motor vehicle equipped with transponders (1) which are arranged in or at the wheels or tires and communicate with respectively one associated wheel house transceiver (4) by means of a wireless unidirectional or bi-directional information and energy transmission, c h a r a c t e r i z e d in that the tire pressure-monitoring device comprises at least one control unit (6) and/or at least one central box (10) being connected to the wheel house transceivers (4) arranged in the area of the wheel houses by way of wheel speed sensor and control conduits (5), or wheel speed sensor conduits (11) and actuating conduits (13).
2. Tire pressure-monitoring device as claimed in claim 1, c h a r a c t e r i z e d in that the wheel house transceivers (4) are connected to wheel speed sensors (2).
3. Tire pressure-monitoring device as claimed in claim 1 or 2, c h a r a c t e r i z e d in that the control unit (6) or the central box (10) uses the wheel speed sensor and control conduits (5) or the wheel speed sensor control conduits (11) to transmit data from and to the wheel house transceivers (4).

4. Tire pressure-monitoring device as claimed in at least one of the previous claims,  
c h a r a c t e r i z e d in that the wheel house transceivers (4) respectively comprise at least one transmitting antenna (20, 21) with an electronic actuating unit for transmitting energy and/or data to the associated transponder (1), and one receiving antenna with amplifying circuit for receiving and amplifying the tire information sent by the associated transponder (1).
5. Tire pressure-monitoring device as claimed in claim 4,  
c h a r a c t e r i z e d in that the at least one transmitting antenna (20, 21) of the wheel house transceiver (4) includes a H-bridge control for transmitting energy and/or data.
6. Tire pressure-monitoring device as claimed in at least one of the previous claims,  
c h a r a c t e r i z e d in that the control unit (6) or the central box (10) interchanges data with other systems in the vehicle through a data line (17).
7. Tire pressure-monitoring device as claimed in at least one of the previous claims,  
c h a r a c t e r i z e d in that the control unit (6) or the central box (10) includes at least one connecting conduit (18) and at least one additional actuating conduit (19) to actuate an additional transponder.

8. Tire pressure-monitoring device as claimed in claim 7,  
c h a r a c t e r i z e d in that the additional  
transponder is integrated into an ignition key or into  
a subassembly (e.g. card or key tag) suitable to start  
the vehicle or to deactivate an immobilizer.
9. Tire pressure-monitoring device as claimed in at least  
one of the previous claims,  
c h a r a c t e r i z e d in that the at least one  
transmitting antenna (20, 21) for the energy  
transmission to the transponder (1) comprises at least  
one coil (23).
10. Tire pressure-monitoring device as claimed in at least  
one of the previous claims,  
c h a r a c t e r i z e d in that the transmitting  
antenna (20, 21) for the energy transmission to the  
transponder (1) comprises at least one coil (23) with a  
ferrite core or a ferromagnetic core, which leads the  
magnetic flux for better conduction to the transponder  
(1).
11. Tire pressure-monitoring device as claimed in at least  
one of the previous claims,  
c h a r a c t e r i z e d in that the transmitting  
antenna (20, 21) for the energy transmission to the  
transponder (1), in addition to at least one coil (23)  
for the energy transmission to the transponder (1),  
comprises further coils to enhance the efficiency by  
directing the magnetic flux through the transponder  
(1).